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REPORT ON VACCINATION IN MYSORE FOR THE CALENDAR YEAR 1920,

WITH THE GOVERNMENT REVIEW THEREON.

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Government of His Highness the Maharaja of Mysore.

GENERAL AND REVENUE DEPARTMENTS.

G. O. No. L. 5739-50—San. 39-21-3, dated 1st April 1922.

Report on the working of the Vaccination Department and of the Vaccine Institute.

Reviews the —— during the year 1920.

READ—

Letter No. P. 50, dated 11th February 1922, from the Sanitary Commissioner in Mysore submitting a report on the working of the Vaccination Department in the State and of the Vaccine Institute, Bangalore, during the calendar year 1920, and stating that the delay in the submission of the report was due to pressure of urgent work in his Office in connection with relapsing fever and the Royal Visit.

ORDER No. L. 5739-50—SAN. 39-21-3, DATED 1ST APRIL 1922.

Recorded. The delay of more than 9 months is unsatisfactory and the reasons given by the Sanitary Commissioner are not convincing as they relate to a much later period than the due date of the report.

2. *Result of vaccination during the year.*—The number of persons vaccinated during the year was 141,451 as against 168,493 during 1919 showing a decrease of 27,042. Under district vaccinations, there was a decrease of 11,145 in the number of persons vaccinated. The average number of cases vaccinated by each vaccinator was 782 as compared with 932 during the previous year.

3. *Prevalence of small-pox.*—The total number of deaths from small-pox registered during 1920 was 5,742 as against 14,222 in 1919, the death rate being 1·00 against 2·5 in the preceding year.

4. *Inspections.*—The total number of vaccinations inspected by the District Health Officers and the Deputy Inspectors of Vaccination was 86,193 as against 86,224 in the year previous. The Sanitary Commissioner inspected the work of vaccinators and Medical Subordinates in 34 towns and 7 villages.

5. *Compulsory vaccination.*—Vaccination was compulsory in 70 Municipal towns including Bangalore, Mysore and the Kolar Gold Fields. It is however reported that except in the 3 places mentioned above and in a few of the Municipalities in the Hassan, Kolar and Shimoga Districts, the provisions of the Compulsory Vaccination Regulation were not strictly enforced. The attention of the Presidents of other Municipalities is invited to the remarks of the Sanitary Commissioner in para 9 of the report and they are requested to take suitable measures for the proper working of the scheme.

6. *Cost of the department.*—The total cost of the department exculsive of the Vaccine Institute amounted to Rs. 55,816-4-11 as against Rs. 50,486-12-5 in the preceding year. The average cost of each successful vaccination was Re. 0-8-6 exclusive of the charges of the Vaccine Institute and Re. 0-10-3 inclusive of the cost of the Institute as against Re. 0-6-5 and Re. 0-7-8 respectively in the previous year.

7. *Vaccine Institute.* The quantity of vaccine extracted during the year 1920 was enough for 205,018 cases against 280,380 during the previous year. The decrease is reported to be due to the inferior quality of calves available and unfavourable weather conditions. The net expenditure during the year was Rs. 7,788-9-4 as against Rs. 3,813-1-10. The gross cost of the lymph supplied during the year was 10·38 pies against 5·9 pies during the previous year.

C. VENKATA RAO,
Secy. to Govt., Rev. Dept.

To—The Sanitary Commissioner in Mysore.
The Presidents of the District Boards.
The Presidents of City Municipal Councils of Bangalore and Mysore.
The President, Kolar Gold Fields Sanitary Board.
PRESS TABLE.

Exd.—C. R.

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REPORT ON VACCINATION IN MYSORE FOR THE CALENDAR YEAR 1920.

ADMINISTRATION.

The control over the Vaccination Department in districts was held by the Presidents of District Boards, as in the year previous in accordance with Government Order No. 8821-30—Sany: 128-17-5, dated the 15th November 1918. Systematic scrutiny continued to be exercised in the Sanitary Commissioner's Office over the weekly and monthly returns of Vaccination and the diaries of the Deputy Inspectors, attention being called from time to time to defective itineration by Inspecting Officers, lack of progress in work, etc., the need for employing full-time Vaccinators in Municipalities and for a vigourous application of the rules under the Compulsory Vaccination Regulation.

ESTABLISHMENT.

2. The staff during the year 1920 consisted of 9 Deputy Inspectors and 158 Vaccinators as against 9 and 145 respectively in 1919. The increase in the number is due to the employment of additional Vaccinators under the revised scheme. Full-time Vaccinators were also entertained for the Municipalities of Shimoga, Chikballapur, Chintamani and Bowringpet. In the last named place, which is a populous town containing numerous "Ghosha" households, the appointment is held by a woman trained in the technique of Vaccination.

From March, by an understanding with the Chief Medical Officer, Kolar Gold Fields Hospital, the vaccination work on the Mining area was entrusted to the Sanitary Overseers of the Mining area, these having been trained in Vaccination.

GENERAL OPERATIONS.

3. The total number of operations performed during the year was 1,41,451 as compared with 1,68,493 in 1919, showing a decrease of 27,042 cases. The figure, however, shows an increase of 37,629 vaccinations over the quinquennial average of 1,03,822. Out of the total number vaccinated 123,778 were primary and 17,673 revaccinations as against 142,621 and 25,872 respectively in 1919.

4. The number and percentage of successful cases in which results were known were 106,067 and 85·6 respectively against 126,131 and 88·4 in the previous year in the case of primary and 6,695 and 37·7 as against 10,901 and 42·1 respectively in 1919 in the case of revaccinations.

DISTRICT VACCINATIONS.

5. Under District Vaccinations, as compared with 1919 there was a decrease of 8,496 in the case of primary and a decrease of 2,649 in the case of revaccinations or an aggregate decrease of 11,145 under the two heads. Five districts, *viz.*, Bangalore, Mysore, Hassan, Kadur and Chitaldrug showed decreases, the largest number 10,733 being for Mysore District. The remaining three districts of Kolar, Tumkur and Shimoga reported an increase in the number of vaccinations, the largest increase 6,278 being for the Shimoga District. The percentage of successful cases to total number vaccinated was 86·69 under primary and 38·16 under revaccination as against 83·57 and 41·22 respectively in the preceding year.

The reason assigned for the fall in the number of vaccinations is that owing to the extensive prevalence of small-pox in the preceding year, an unusually large number of vaccinations was done in that year resulting in a smaller number of unprotected persons in the subsequent year. A glance at the comparative statement No. IV will show that the work during 1920 stands second only to 1919 during the whole decade. It will also be seen from paragraph 16 that there was no diminution

in the percentage of children under one year of age based on the birth-rate that were protected against small-pox during the year.

6. The average number of cases vaccinated by each Vaccinator was 782 as compared with 931 in the year previous.

Vaccinations in Municipal Areas.

7 During the year under report the operations performed in Municipalities where special Vaccinators were employed numbered 22,352, of which 13,982 were primary and 8,370 were revaccinations as against 31,896, 19,656 and 12,240 respectively in 1919. The percentage of successful cases excluding unknown was 88·9 under primary and 50·5 under revaccinations as against 92·76 and 57·18 respectively in the preceding year.

Vaccination by Dispensary Staff.

8. The number of vaccinations performed by Medical subordinates in dispensaries during 1920 was 11,906, of which 9,547 were primary and 2,359 were revaccinations as against 17,868, 14034 and 3,834 respectively in the preceding year. The percentage of successful cases excluding unknown was 784 under primary and 22·9 under revaccinations as against 79·0 and 39·7 respectively in the year previous.

Compulsory Vaccination.

9. The Compulsory Regulation was newly introduced into fifteen Municipal areas and renewed in thirteen other Municipalities during the year. Thus at the close of the year, the Regulation was in force in 70 Municipal towns including the cities of Bangalore, Mysore and Kolar Gold Fields. 981 notices under the Regulation were issued in Bangalore City during the year against 147 in the previous year. Thirty-seven, 30 and 200 notices were similarly issued in a few of the Municipalities in the Hassan, Kolar and Shimoga Districts. In the rest of the Municipalities where vaccination was compulsory, the procedure prescribed by the rules was not strictly enforced, compulsory vaccination having been merely nominal. The attention of the Local Authorities was frequently drawn both personally by Officers of the Department during their inspections as well as by means of communications based on the scrutiny of the periodical returns to the need for making arrangements to enforce the provisions of the rules under the regulations.

The Compulsory Vaccination Regulation was introduced into all the Malnad taluks of the Shimoga District during the year. Nine hundred and fifty notices are reported to have been served under the Regulation in the Taluks of Sorab, Sagar Nagar and Shikarpur.

Extent of prevalence of Small-pox.

10. The total number of deaths from small-pox registered during 1920 was 5,742 as against 14,222 in 1919 the death-rate being 1·00 against 2·5 in the preceding year. The largest number of deaths occurred in the Kadur District and the fewest in Bangalore District the death-rates for these districts being 2·11 and 21, respectively. The death-rate was also high in Tumkur District (2·03) Shimoga District (1·53,) and Chitaldrug District (1·86,). Necessary arrangements were made for combating the disease by concentrating vaccination work in the affected and the adjoining areas.

Inspections.

11. The total number of children inspected by the Deputy Inspectors of Vaccination during the year was 76,038 as against 81,275 in 1919. The percentage of cases found with marks of successful vaccination to the total number inspected was 52·01 as against 38·6 in the preceding year. The percentages of unprotected cases and of small-pox cases to total number inspected during the year were 21·6 and 26·4 respectively.

12. The number inspected by the District Health Officers and by the District Medical and Sanitary Officers during the year was 10,155 as against 4,949; the percentage of cases bearing successful marks of Vaccination was 71·5 as against 57·1 in the preceding year. The percentages of unprotected cases and of small-pox cases to

total number inspected during the year were 15·8 and 12·6 respectively as against 21·4 and 21·5 in the preceding year.

13. The Medical subordinates inspected 26,342 children, of whom 16,071 bore successful marks of vaccination as against 39,610 and 23,536 respectively in 1919. The percentage of cases bearing successful marks of vaccination to total number inspected was 61·0 as compared with 59·4 in the preceding year. The percentages of unprotected and of small-pox cases to total number inspected were 19·1 and 19·8 respectively during the year under report.

14. The number of cases verified by the District Health Officers and by the Deputy Inspectors with reference to the vaccinators' current returns was 6,614 and 26,825 as against 1,560 and 23,311 respectively in 1919. Thus the total number verified by the inspecting officers during the year was 33,439 as against 24,871 in 1919 and of which 26,686 or 79·8 per cent of the number verified were found to agree in every respect with the returns.

15. The Sanitary Commissioner inspected the work of Vaccinators and Medical subordinates in 34 towns and 7 villages.

Protection afforded by Vaccination.

16. The number of persons successfully vaccinated per 1,000 of population in the State was 18·35 against 21·8 in 1919. On the recorded birth-rate of 16·95 per 1,000 of population 30·5 per cent of children under one year of age were protected against 30·7 per cent in the previous year.

Cost of the Department.

17. The cost, exclusive of the Vaccine Institute, amounted to Rs. 55,816-4-11 as against Rs. 50,486-12-5 of the preceding year. The average cost of each operation, exclusive of the charges of the Vaccine Institute was 0-6-11 and of each successful case of Vaccination was 0-8-6 as compared with 0-5-4 and 0-6-5 respectively in the previous year. If the charges of the Vaccine Institute are included, the average cost of each operation would amount to 0-8-3 and of each successful case 0-10-3 as against 0-6-4 and 0-7-8 respectively in the preceding year.

General Remarks.

18. On the whole the year's work was well in advance of the average.

19. In urban areas, the Medical subordinates in charge of dispensaries continued to be *Ex-officio* Vaccinators. But as the dispensary work proper takes up practically their whole time and attention they could not be expected to do anything more than vaccinate such of the children as were taken to the dispensary for vaccination. With a view to remedy this defect and to raise the low standard of protection against small-pox that obtains in these areas, a circular letter was addressed to the Presidents of the District Boards requesting them to permit the Taluk Vaccinator to take part in the town vaccination, without prejudice to his legitimate duties. Under this procedure the Taluk Vaccinator is required to perform vaccinations at the Taluk Headquarters or other Municipal town in the taluk, where there is no full-time vaccinator as a part of his ordinary duties. The local Sanitary Inspector however is held responsible for the maintenance of lists of unprotected children and for the application of the rules under the Regulation, in case vaccination has been declared compulsory in the area.

20. With a view to ensure the uniform progress of vaccination throughout the year, the President of District Boards were addressed on the desirability of arranging for the provisions of the Compulsory Vaccination Regulation being enforced irrespective of whether the people are living in their own houses or in the temporary huts near by. From the point of view of small-pox prevention, it is important that all unprotected children should be vaccinated in the off season of the epidemic, *i.e.*, from July to December.

21. Another measure to which special attention was directed was vaccination in Holageris and Madigeries. During inspections, it was found that the progress of vaccination in these areas was particularly backward and that, as a consequence, epidemics of small-pox had their starting point in these localities. The Deputy Inspectors of Vaccination were required to make a special report in their weekly diaries in respect

of the action taken to vaccinate the unprotected children in the localities. The figures furnished by the Deputy Inspector of Vaccination, Kadur District, show that the number of vaccinations done in the Holageries and Madageries in the district during the year averaged 16·7 per cent of the total for the district.

In this connection, the attention of the President of the District Boards was invited to the desirability of recruiting new vaccinators from among classes who can freely enter into and vaccinate the people in the Holageris.

22. With a view to ensure the full potency of the vaccine lymph and the protective power of vaccination, the Vaccinators were enjoined to exercise due care in the preservation of lymph from heat during the hot weather. Six insertions were advised instead of four as at present in order to obtain the required scar area *viz.*, 0·5 Sq. inch. Revaccination as soon as possible was also advised in all cases which did not yield this scar area.

The question of supplying kits to all Vaccinators including heat-proof vaccine carriers also received attention during the year. Sample kits in use in different provinces in India were obtained for the purpose of examining their comparative merits and for devising a suitable kit for use in Mysore. Proposals in this connection will be submitted to Government.

Report on the working of the Mysore Government Vaccine Institute for the year 1920.

I. Supply of Calves.

The supply of calves was as usual arranged by contract. Twenty one calves remained at the close of the year 1919 and 444 calves were purchased during the year making a total of 465 calves against 427 in the year previous. Of the calves, 59 or 13·3 per cent had to be purchased departmentally during January and June owing to the contractors failure to supply the calves in time, against 56 or 13·2 per cent during the year previous.

2. The net cost of calves purchased during the year was Rs. 4,124-7-0 or an average of Rs. 9-4-7·5 per calf against Rs. 2,174-11-0 or an average of Rs. 5-2-3·09 per calf during the year previous.

II. Vaccination of Calves.

3. Four hundred and thirty-four calves were vaccinated during the year and one calf died before vaccination. Of the calves vaccinated, 102 had to be rejected before bacteriological examination of paste and 8 after bacteriological examination on account of the unhealthy condition of vesicles and 18 calves on account of failures The remaining 306 calves yielded paste enough for 2,05,018 cases.

4. The average yield per calf vaccinated was 472·4 cases against 751·27 cases in the year previous. The decrease is partly apparent as the dose per case during the course of the year was increased from 3/7th of a grain to 3/5th of a grain and partly really owing to inferior quality of calves available and unfavourable weather conditions.

III. Health of Calves.

5. There were 5 deaths amongst calves during the year against 3 during the year previous. Of the five deaths, one was due to Diarrhœa before vaccination and the other four to Diarrhœa after vaccination. About the beginning of May, an epidemic of foot and mouth disease prevailed amongst the calves in the Institute, which lingered till about June. The suspected calves were promptly segregated, returned to the contractor as per terms of agreement and the usual precautionary measures rigorously adopted to keep the disease under control and to prevent its spread amongst other calves. On the whole, the quality of calves available during the year was poor and not quite up to the mark although the prices tendered were much higher than in the year previous.

Feeding of Calves

6. The expenditure under feeding amounted to Rs. 868-15-3 or an average of Rs. 1-15-4 per calf against Rs. 817-13-11 or an average of Rs. 1-14-8 per calf during the year the previous.

Sale of Calves.

7. The amount realised by the sale of calves during the year was Rs. 854-15-0 or an average of Rs. 1-15-5 per calf against 1,032-11-0 or an average of Rs. 2-7-0.7 per calf during the year previous. The fall was due to lower prices offered for vaccinated calves during the year.

Issue of Vaccine.

8. The vaccine issued from the Institute was,as usual, Lanoline vaccine. The quantity supplied during the year as compared with the year previous was as follows :—

Names	1919	1920
Vaccinators of Bangalore District	24,505	19,665
Do — Kolar do	38,490	32,015
Do Tumkur do	17,940	17,475
Do Mysore do	40,955	27,825
Do Hassan do	20,867	15,335
Do Shimoga do	21,181	27,595
Do Kadur do	18,375	16,555
Do Chitaldrug do	8,800	8,190
Medical Officers and subordinates	33,732	23,664
Out stations	55,535	2,672
Total	2,80,380	1,90,991

Results.

9. The results of the vaccinations performed with the paste issued from the institute as compared with the previous year were as follows:-

Particulars	Percentage of successful cases during 1919	Percentage of successful cases during 1920
Vaccinators of the State	93·04	89·48
Medical Officers and subordinates	9·07	86·26
Out stations	97·61	87·78

10. The details of the several districts are tabulated below :—

By Vaccinators.

Districts	No. of cases vaccinated	No. of cases unknown	No. of cases successful	Percentage
Shimoga	18,904	398	16,928	91·47
Hassan	8074,	431	6,455	84·45
Kadur	10,777	478	9,222	89·54
Chitaldrug	5,886	213	4,713	83·07
Bangalore	13,556	248	12,017	90·29
Tumkur	12,473	646	10,648	90·03
Kolar	15,782	604	14,049	92·56
Mysore	15,863	519	13,635	88·46
Medical Officer of Health, K. G. F.	3,750	146	3221,	89·37
Health Officer, Mysore City	4,137	442	3,343	90·41
Health Officer, Bangalore City	3,691	36	3,281	89·76
Total	1,12,893	4,161	97,512	89·48

By Medical Officers and Subordinates.

Districts	No. of cases vaccinated	No. of cases unknown	No. of cases successful	Per-centage
Mysore	1,244	58	972	81·95
Kolar	1,173	55	987	88·28
Hassan	261	..	261	100·00
Bangalore	1,377	63	1,080	82·19
Kadur	855	44	721	88·90
Shimoga	2,031	895	1,100	96·83
Tumkur	1,400	36	1,155	84·67
Chitaldrug	927	9	719	78·32
	9,268	1,160	6,995	86·26

Out Stations.

	No. of cases vaccinated	No. of cases unknown	No. of cases successful	Percentage
The Deputy Sanitary Commissioner, Central Range, Madras.	407	50	296	82·91
The Dewan of Sandur, Bellary District	49	1	39	81·25
The Superintendent, Central Jail, Trichur	9	2	7	100·00
The Municipal Council, Erode	137	10	79	62·20
The Health Officer, Rangoon	645	59	573	97·78
The Senior Sub-Assistant Surgeon, Sholapur	28		27	96·42
The Chief Medical and Sanitary Officer, Eranakulam.	640	2	575	90·12
The Health Officer, Civil and Military Station, Bangalore	362		294	81·21
	2,277	124	1,890	87·78

11. The following statement shows the Income and Expenditure for 1920 as compared with that of the year previous.

Items	Income		Items	Expenditure	
	1919	1920		1919	1920
Sale of vaccinated calves	1032 11 0	854 15 0	Salaries	2430 0 0	2640 10 0
Sale of lymph	3203 7 1	1738 3 3	Establishment	1367 1 11	1537 6 0
Amount outstanding at the close of the year	1671 12 9	1019 4 6	Cost of calves	3707 6 0	4979 6 0
			Feeding of calves	817 13 11	868 15 3
			Other charges and contingencies	1398 10 10	1374 10 10
			Total gross expenditure	9721 0 8	11401 0 1
			Deduct Income	5907 14 10	3612 6 9
Total	5907 14 10	3612 6 9	Net Expenditure	3813 1 10	7788 9 4

12. The gross cost of lymph supplied during the year was 10·38 pies per case against 5·9 pies during the previous year. The net cost of lymph supplied during the year under report was 7·3 pies against 2·3 pies per case during the year previous. The rise in cost was due to high prices prevailing and also to smaller quantities supplied to out stations owing to demands from the State.

Training of Vaccinators.

13. Four candidates for vaccinators' appointment were trained during the year against 15 during the year previous. Rules regarding admission of candidates for vaccination training were revised and the average period of training was raised to three months as per Government Order No. G. 27150-9—I. San. 22-19-13, dated the 9th June 1920. Besides the four candidates 7 pupil compounders were also given training in Vaccination for 6 weeks as per Government Order No. G. 27328-9—Med. 94-19-8, dated the 12th June 1920. Twenty-one students of the Sanitary Inspectors' Class were also given instructions on the Theory and Practice of Vaccination.

Staff.

14. There were practically no changes in the staff during the year under report except for a period of 2 weeks in May when the Superintendent was on privilege leave and Mr. G. M. Dominick Assistant Director of the Public Health Institute was in charge of the Vaccine Institute in addition to his own duties.

Bacteriological Examination.

15. Paste was despatched from the institute only after its purity was assured by bacteriological examination. During the year under report 367 samples were examined 380 times. Eight samples were rejected on the following grounds:—

Excess of Staph. Pyo Aureus	..	6
Do Citreus	..	1
Do B. Pyocyaneuse and Subtilis	..	1
Total	..	8

General Remarks.

16. The bulk of the vaccinations appear to have been done during the hot weather of the year when small-pox prevailed to some extent and people were more likely to come forward for vaccination. But unfortunately during the hot weather lymph deteriorates soon, and gives a larger proportion of failures than usual even when the vaccination itself is carefully done. A circular order was issued requiring the average number of insertions to be raised from 4 to 6. The dose per case was also increased from 3/7th grain to 3/5th grain. As a further precaution smaller supplies at more frequent intervals are sent to ensure as far as possible, freshness of paste before use.

A. K. PANI,
Sanitary Commissioner.

Statement showing particulars of Vaccination in the Mysore State during the year 1920.

Circles and Districts	Population of circles or Districts according to census of 1911	Average population per square mile	Average number of Vaccinators employed throughout the season	The number of persons vaccinated			Average number of persons vaccinated by each Vaccinator	Primary Vaccination				
				Males	Females	Total		Total	Successful			Unknown
									Under one year	Over one and under six years	Total of all ages	
	2	3	4	5	6	7	8	9	10	11	12	13
1. Bangalore District	7,59,522		17	7,406	6,245	13,651	803.0	13,556	2,861	8,522	12,017	248
2. Kolar ,,	7,23,325		18	8,486	7,640	16,126	840.3	15,505	3,089	9,040	13,824	595
3. Tumkur ,,	7,29,307		16	7,090	5,616	12,706	794.1	12,473	2,154	7,238	10,648	..
4. Mysore ,,	12,70,765		21	8,835	7,303	16,138	768.5	15,863	5,305	6,514	13,635	510
5. Hassan ,,	5,72,739		19	4,952	3,873	8,825	464.5	8,074	958	4,393	6,455	..
6. Shimoga ,,	5,16,716		21	11,970	8,347	20,317	967.5	18,004	1,373	9,103	17,017	..
7. Kadur ,,	3,29,920		17	8,830	5,187	14,017	824.5	10,777	1,892	4,195	9,222	478
8. Chitaldrug ,,	5,47,183		8	2,902	2,511	5,413	676.6	5,097	988	2,730	4,096	104
Total	54,49,477		137	60,471	46,722	1,07,193	782.5	1,00,249	18,620	51,735	86,914	1,944
1. Bangalore City	88,651		4	2,028	1,732	3,760	940	3,691	2,372	845	3,281	36
2. Kolar Town	8,193		1	201	128	329	329	277	139	68	225	9
3. Mysore City	71,306		4	2,664	2,043	4,707	1,177	4,137	2,105	1,103	3,343	442
4. Chikmagalur Town	8,537		1	268	198	466	466	398	168	79	353	8
5. Hassan ,,	7,461		1	162	135	297	297	234	178	68	196	1
6. Kolar Gold Fields	48,635		5	4,183	5,403	9,586	1,917.2	3,750	1,686	1,230	3,221	146
7. Tumkur Town	6,039		1	364	268	632	632	520	228	170	410	10
8. Chitaldrug ,,	6,986		1	186	128	314	314	287	108	128	246	6
9. Davangere ,,	10,074		1	268	242	510	510	503	171	136	320	102
Total	2,55,882		19	10,324	10,277	20,601	1084.3	13,797	7,155	3,827	11,595	760
1. Vaccine Institute			2	1,681	70	1,751	875	185	14	..	72	111
GRAND TOTAL	57,05,359		158	72,476	57,069	1,29,545	819.9	1,14,231	25,789	55,562	98,581	2,815

Statement showing particulars of Vaccination in the Mysore State during the year 1920—*concld.*

Circles and Districts	Re-vaccination			Percentage of successful cases excluding unknown		Persons successfully vaccinated per 1,000 of population	Percentage of unknown cases to total cases		Average annual number of persons successfully vaccinated during past five years		Average annual number of deaths from small-pox during previous five years	
	Total	Successful	Unknown	Primary	Re-vaccination		Primary	Re-vaccination	Number	Ratio per 1,000 of population	Number	Ratio per 1,000 of population
	14	15	16	17	18	19	20	21	22	23	24	25
1. Bangalore District	95	23	8	90.30	26.44	15.85	1.89	8.42	12379.4	16.31	450	.59
2. Kolar „	621	141	10	89.1	22.7	19.39	3.83	1.61	11727.6	16.21	743.4	1.02
3. Tumkur „	233	71	..	85.37	30.47	14.69	..	..	6770.4	9. 28	798.6	1.09
4. Mysore „	275	97	15	85.9	35.27	10.80	3.27	5.45	17,408	13.77	1,883	1.48
5. Hassan „	751	159	..	79.94	21.15	11.54	..	..	7088.6	12.37	564.8	.98
6. Shimoga „	1,413	441	..	90.00	31.2	33.78	..	..	6170.8	11.94	184.4	56
7. Kadur „	3,240	1,625	354	85.57	50.15	32.87	4.43	10.90	64.558	19.57	244.8	.70
8. Chitaldrug „	316	93	36	78.4	29.09	7.65	2.06	11.07	3786.8	6.92	458.2	.83
Total ..	6,944	2,650	423	86.69	38.16	16.43	1.93	6.09	71486.8	13.12	5327.2	.98
1. Bangalore City	69	30	..	88.88	43.49	37.38	.97	..	3,272	36.90	30.4	.34
2. Kolar Town	52	1	40	83.95	8.33	27.58	3.25	1.92	332.8	40.62	7.2	.87
3. Mysore City	570	35	423	80.84	6.14	47.37	10.68	74.21	3780.2	53.00	47.6	.65
4. Chikmaglur Town	68	27	15	88.69	39.70	44.51	2.00	22.06	308.6	36.26	13.00	1.05
5. Hassan „	63	34	8	83.76	53.96	30.82	.42	12.69	192.4	25.79	19.8	2.65
6. Kolar Gold Fields	5,836	3,254	757	85.89	55.75	133.13	3.89	12.97	8572.6	176.26	38.6	.76
7. Tumkur Town	112	14	17	78.84	12.5	70.21	1.92	15.18	408.4	67.62	3.6	.59
8. Chitaldrug „	27	4	23	85.7	14.8	35.78	2.09	85.1	244.3	35.25	3.8	.54
9. Davangere	7	4	..	63.61	20.2	32.16	57.14		445.2	44.19	17.8	1.76
Total ..	6,804	3,403	1,283	88.9	50.5	58.61	5.50	18.85	17,459	68.24	181.8	71
1. Vaccine Institute	15,66	111	133	38.9	7.08	..	60.00	8.49	220.6	..	..	..
GRAND TOTAL ..	15,314	6,164	1,839	86.38	40.25	18.35	2.46	12.00	89166.4	15.06	5327.2	.93

Summary to Statement I showing particulars of Vaccination.

	Total No. of persons vaccinated		Total No. of operations performed		Percentage of successful cases in which results were known		Average No. of persons vaccinated by each Vaccinator		No. of children successfully vaccinated		Ratio of successful vaccinations per 1,000 of population	Total cost of the department	Average cost of each successful case	Remarks
	Primary	Re-vaccination	Primary	Re-vaccination	Primary	Re-vaccination	Vaccinators employed	Persons vaccinated by each Vaccinator	Under one year	One and under six years				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
By special staff (District and Municipal)	114,046	13,748	1,14,168	13,748	86.3%	44.0%	158	809	25,775	55,562	18.35	67,217 5 0	0 10 3	
By dispensary staff ..	9,547	2,359	9,743	2,359	78.4%	22.9%	143	90	3,683	3,024	....	....	..	
By other agencies, if any ..	185	1,566	185	1,566	38.9%	7.0%	2	875	14	....	....	....	..	
Total ..	1,23,778	17,673	1,24,096	17,673	85.6%	37.7%	303	467	29,472	58,586	19.8	67,217 5 0	0 9 6	

STATEMENT No. II.

District	Establishment							Chaprasis and other servants	Expenditure			
					Vaccinators							
	Health Officer	Superintendent of Circles	Deputy Inspectors	Reserve Vaccinators	I Class	II Class	III Class		Pay of Establishment	Travelling allowances	Contingencies	Total Cash
1	2	3	4	5	6	7	8	9	10	11	12	13
									Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Bangalore	..	..	1	1	5	4	7	1	4776 0 0	2676 10 4	56 6 9	7509 1 1
Kolar	..	..	1	1	4	3	10	1	5642 8 3	1146 3 0	19 0 0	6807 11 3
Tumkur	..	..	1	3	1	12	2	1	4789 5 0	1611 7 7	53 0 3	6453 12 10
Mysore	..	..	2	2	1	2	15	2	5021 1 9	3185 12 6	....	8206 14 3
Hassan	1	..	1	1	1	4	12	1	5020 14 0	435 14 0	60 1 7	5516 13 7
Shimoga	1	..	1	1	6	7	7	1	5627 13 10	1494 10 1	....	7122 7 11
Kadur	1	..	1	1	1	2	13	1	5647 14 4	1358 15 4	97 14 3	7104 11 11
Chitaldrug	1	..	1	1	..	2	8	1	2905 6 4	397 13 9	20 0 0	3323 4 1
Total	4	..	9	11	19	36	74	9	39430 15 6	12307 6 7	306 6 10	52044 12 11
Bangalore City	1	..	..	..	1	1	2	....	1218 0 0	....	170 0 0	1388 0 0
Tumkur Town	..	..	..	..	..	..	1	....	180 0 0	....	....	180 0 0
Kolar Town	..	..	..	..	..	..	1	....	180 0 0	....	18 8 0	198 8 0
Mysore	1	..	..	..	1	2	..	....	582 0 0	....	113 0 0	695 0 0
Chikmagalur	..	..	..	..	..	1	..	....	264 0 0	....	6 0 0	270 0 0
Hassan	..	..	..	..	..	..	1	....	180 0 0	....	....	180 0 0
Kolar Gold Fields	1	..	..	..	..	..	3	....	400 0 0	....	....	400 0 0
Chitaldrug	..	..	..	..	..	..	1	....	217 8 0	....	....	217 8 0
Davangere	..	..	..	..	..	..	1	....	242 8 0	....	....	242 8 0
Total	3	..	..	..	2	4	10	....	3464 0 0	....	307 8 0	3771 8 0
Vaccine Institute	..	1	..	..	2	..	..	1 Clerk and 4 servants	4178 0 0	....	7223 0 1	11401 0 1
Grand Total	7	1	9	11	23	40	84	1 Clerk and 13 servants	47072 15 6	12307 6 7	7836 14 11	67217 5 0

STATEMENT II—*concld.*

District	Paid from			Jahgir	Total	No. of all successful vaccinations and re-vaccinations	Average cost of each successful case.
	Provincial Fund	Local Fund	Municipalities				
	14	15	16	17	18	19	20
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.
Bangalore	1365 14 4	6143 2 9	....	....	7509 1 1	12040	0 0 11.75
Kolar	1070 8 0	5356 14 0	380 5 3	....	6807 11 3	13965	0 7 9.6
Tumkur	1371 1 9	5082 11 1	....	....	6453 12 10	10719	0 9 7
Mysore	2524 3 10	5538 10 5	....	144 0 0	8206 14 3	13732	0 9 6
Hassan	1215 15 7	4300 14 0	....	....	5516 13 7	6614	0 13 4
Shimoga	3512 14 3	3609 9 8	....	....	7122 7 11	17458	0 6 6
Kadur	2961 4 8	4143 7 3	....	....	7104 11 11	10847	0 10 6
Chitaldrug	1094 9 9	2228 10 4	....	....	3323 4 1	4189	0 12 8
Total	15116 8 2	36403 15 6	380 5 3	144 0 0	52044 12 11	89,564	0 9 3
Bangalore City			1388 0 0		1388 0 0	3311	0 6 9
Tumkur Town			180 0 0		180 0 0	424	0 6 9
Kolar Town			198 8 0		198 8 0	226	0 14 0.6
Mysore			695 0 0		695 0 0	3378	0 3 4
Chikmagalur			270 0 0		270 0 0	380	0 11 4
Hassan			180 0 0		180 0 0	230	0 12 6
Kolar Gold Fields			400 0 0		4000 0 0	6475	0 0 11·8
Chitaldrug			217 8 0		217 8 0	250	0 13 11
Davangere			242 8 0		242 8 0	324	0 11 11
Total	....		3771 8 0		3771 8 0	14998	0 4 0
Vaccine Institute	11401 0 1				1401 0 1	183	....
Grand Total	26517 8 3	36403 15 6	4151 13 3	144 0 0	67217 5 0	104,745	0 10 3

STATEMENT No. III.

Statement showing the Dispensary Vaccination in the Mysore State during the year 1920.

District	No. of dispensaries in each district to which a Vaccinator is attached	Average No. of Vaccinators attached to the Dispensaries during the year	Total number of persons vaccinated	Average, number of persons vaccinated by each Vaccinator,	Primary and Secondary Vaccinations				Re-vaccination			Percentage of successful cases excluding unknown		Percentage of unknown cases to total cases	
					Total	Successful			Unknown	Total	Successful	Unknown	Primary and secondary vaccinations	Re-vaccination	Primary and secondary vaccinations	Re-vaccination
						Under one year	Over one and under six years	Total of all ages								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Bangalore City ..	7	7	2109	301	549	336	91	536	9	1560	121	113	97.6	7.7	1.6	7.2
2. Mysore City ..	6	6	162	27	145	80	47	133	2	17	10	3	93.0	71.4	1.3	17.6
3. Bangalore District	18	18	1724	96	1672	909	463	1372	56	52	27	11	82.0	51.9	3.3	20.7
4. Kolar ,,	15	15	1199	79	1173	408	413	987	55	26	13	3	88.2	56.5	4.7	11.5
5. Tumkur ,,	13	13	908	69	880	367	371	745	26	28	11	9	84.6	39.3	2.9	32.1
6. Mysore ,,	26	26	1292	50	1236	564	214	914	58	56	23	10	73.9	41.0	4.7	17.8
7. Hassan ,,	13	13	394	30	367	153	217	362	..	27	12	5	91.8	37.5	..	14.8
8. Shimoga ,,	21	21	2031	97	1639	319	468	896	707	392	204	188	54.6	52.0	43.1	48.9
9. Kadur ,,	13	13	1112	86	959	269	354	822	93	153	84	19	85.7	54.9	9.7	12.4
10. Chitaldrug ,,	11	11	975	89	927	281	386	719	9	48	26	1	77.17	54.1	0.9	2.0
Total	143	143	11,906	90	9547	3683	3024	7486	1015	2359	531	362	78.4	22.9	10.6	15.3

COMPARATIVE STATEMENT No. IV.

Showing the number of persons primarily vaccinated and the number of those who were successfully vaccinated in each of the undermentioned official years.

Establishment	Persons primarily vaccinated																			
	Years ended 31st December																			
	1911		1912		1913		1914		1915		1916		1917		1918		1919		1920	
	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated	Total number	Number successfully vaccinated
Government	56,504	52,997	67,077	61,354	75,133	70,060	94,710	89,048	74,386	70,529	66,314	61,751	64,551	60,355	64,978	60,174	1,08,940	88,154	1,751	183
Municipal	7,618	6,857	9,725	8,732	10,051	9,057	18,977	1,305	16,147	14,808	14,649	13,392	16,331	14,567	16,291	14,027	19,656	16,879	20,601	14,908
Local Funds																			1,07,193	89,564*
Native States	6,620	6,215	8,668	7,753	14,393	12,718	16,824	15,040	12,857	11,309	9,678	8,421	10,020	9,323	10,273	8,074	14,034	11,099	11,906	8,017
Dispensaries																				
Army																				
European																				
Native																				
Total	70,742	66,069	85,470	77,839	99,577	91,835	1,26,511	1,17,993	1,03,390	96,646	90,647	83,534	90,902	84,245	91,542	83,145	1,42,640	1,16,131	1,41,451	1,12,762

* As the staff of Vaccinators is now transferred to the entire control of the District Board, the figures returned from the districts is shown against "Local Funds."

STATEMENT No. V.

Statement showing particulars of Vaccination verified by inspecting officers for the year 1920.

District	Total number of persons vaccinated as per returns with reference to which inspections were made	Total number inspected by		Number found correctly reported by		Percentage of cases found correctly to total number inspected by	
		District Sanitary Officer	Deputy Inspector of Vaccination	District Sanitary Officer	Deputy Inspector of Vaccination	District Sanitary Officer	Deputy Inspector of Vaccination
1	2	3	4	5	6	7	8
Bangalore District ..	13,651	160	1,165	127	1,104	85.6%	94.7%
Kolar ,, ..	16,126	14	8,632	14	8,135	100%	94.2%
Tumkur ,, ..	12,706	880	3,817	620	3,296	70.4%	86.3 %
Mysore ,, ..	16,138	719	979	319	759	468.	77.5%
Hassan ,, ..	8,825	320	3,987	320	1,211	100%	30.4%
Shimoga ,, ..	20,317	3,000	3,500	2,700	2,800	90%	80.0 %
Kadur ,, ..	14,017	586	2,360	436	1,940	74.4%	82.2%
Chitaldrug ,, ..	5,413	935	2,385	810	2,085	87.7%	87.0%
Total ..	1,07,193	6,614	26,825	5,356	21,230	80.9%	79.5%

Statement of Vaccination Inspection by District Health Officers for the year 1920.

District or name of dispensary	Total number inspected	Number bearing successful marks of vaccination	Number of unprotected cases	Number bearing small-pox marks	Percentage of		
					Success to total No. inspected	Unprotected cases to total No. inspected	Of small-pox cases to total No. inspected
Bangalore District ..	23	20	2	1	86.9%	8.7%	4.4%
Kolar ,, ..	1,225	1,078	41	106%	88.0%	3.3 %	8.6%
Tumkur ,, ..	685	375	200	110	54.7%	29.2%	16.0%
Mysore ,, ..	719	337	247	135	46.9%	34.4%	18.8%
Hassan ,, ..	1,182	818	173	191	69.2%	14.6	16.1%
Shimoga ,, ..	3,000	2,700	132	168	90.0%	4.4%	5.6%
Kadur ,, ..	586	436	13	137	74.4 %	2.2%	23.4%
Chitaldrug ,, ..	2,735	1,500	800	435	51.2%	29.2%	5.9%
Total ..	10,155	7,264	1,608	1,283	71.5%	15.8%	12.6%

Statement of Vaccination Inspection by Deputy Inspectors of Vaccination for the year 1920.

District or name of dispensary	Total number inspected	Number bearing successful marks of vaccination	Number of unprotected cases	Number bearing small-pox marks	Percentage of		
					Success to total No. inspected	Unprotected cases to total No. inspected	Of small-pox cases to total No. inspected
Bangalore District ..	6,459	3,813	1,225	1,411	59·0%	19·1%	21·8%
Kolar ,, ..	10,131	8,173	1,127	831	80·7%	11 1%	8.2 %
Tumkur ,, ..	5,786	3,296	1,069	2,421	48·6%	15·8%	35·7%
Mysore ,, ..	24,397	7,412	7,557	9,428	30·3%	30·9%	38·6%
Hassan ,, ..	3,987	1,211	799	1,977	32·9%	20·0%	49·6%
Shimoga ,, ..	3,500	2,800	200	500	80·0%	6·0%	14%
Kadur ,, ..	9,942	5,002	2,553	2,387	50·3%	25·6%	24·0%
Chitaldrug ,, ..	10,836	7,843	1,893	1,100	72·4%	17·5%	10·2%
Total ..	76,038	39,550	16,433	20,055	52·01%	21·6 %	26·4%

Statement of Vaccination Inspection by Medical Subordinates for the year 1920.

District or name of dispensary	Total number inspected	Number bearing successful marks of vaccination	Number of unprotected cases	Number bearing small-pox marks	Percentage of		
					success to total No. inspected	Unprotected cases to total No. inspected	Of small-pox cases to total No. inspected
Bangalore District ..	6,391	4,000	1,652	739	62.8%	25·8%	11·2%
Kolar ,, ..	5,461	3,369	578	1,514	61.6%	10·5%	27·7%
Tumkur ,, ..	3,912	1,930	756	1,226	49.3%	19·3%	33·9%
Mysore ,, ..	23.61	1,519	221	621	64.3%	9·4%	26·2%
Hassan ,, ..	1,472	640	650	182	43.5%	44·1%	12·3%
Shimoga ,, ..	2,340	1,931	135	274	82.5%	5·7%	11·7%
Kadur ,, ..	1,124	906	150	68	89.5%	13·3%	6·0%
Chitaldrug ,, ..	3,281	1,776	901	604	5·41%	27·4%	18·4%
Total	26,342	16,071	5,043	5,228	61.0%	19·1 %	19·8%